

## REMARKS

### A. Background

No claims are presently amended, cancelled or added. Thus, claims 1-5, 7-10, 12-20, 22-24, 26-29, 33-38, 40, 41, and 43-47 remain pending for reconsideration.

Reconsideration of the application is respectfully requested in view of the presently pending claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicant requests that the Examiner carefully review any references discussed below to ensure that Applicant's understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

### B. Rejection on the Merits

#### 1. Rejections Under 35 U.S.C. § 103(a)

The PTO must satisfy certain requirements in order to establish an obviousness-type rejection. As the Examiner is aware, the issue under § 103 is whether the PTO has stated a case of *prima facie* obviousness. According to the MPEP § 2142, the Examiner has the burden and must establish a case of *prima facie* obviousness by showing some motivation in a prior art reference to combine that reference with other prior art, or modify that reference, to teach all of

the claim limitations in the instant application and have some reasonable expectation of success.

The Applicant respectfully asserts the Office Action has not satisfied the requirement for establishing a case of *prima facie* obviousness against the presently pending claims.

a. Rejection Over Jones in View of Okajima

Claims 1-5, 7, 14, 15, 17-20, 22, 23, 40, 41, and 43 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jones et al.* (U.S. Pat. No. 6,132,427) in view of *Okajima* (U.S. Patent No. 5,554,139) for the reasons set forth on pages 2-4 of the Office Action. Applicant respectfully traverses.

*Jones* discloses an electrosurgical blade having an electrically insulating coating, such as a ceramic, narrowly offset from the cutting edge, and an optional porous hydrophobic polymer coating that “provides a substantially hydrophobic conductive path” (*see*, column 2, lines 13-24). Examples of such a hydrophobic polymeric coating include fluorocarbons, silicone, and parylene (*see*, column 2, lines 7-10). Thus, *Jones* teaches that hydrophobic polymers can be applied to a ceramic, and coat an electrosurgical equipment. However, *Jones* is completely devoid of disclosing or suggesting that it would be possible or beneficial to coat any portion of an electrosurgical instrument with a hydrophilic or hydrophilic-hydrophobic block copolymer.

On the other hand, *Okajima* teaches catheters having hydrophilic lubricious coatings (*see*, Abstract). In order to obtain the hydrophilic lubricious coating on a catheter, *Okajima* teaches the use of a hydrophilic-hydrophobic block copolymer (*see*, column 9, line 65 through column 10, line 7). However, *Okajima* is completely devoid of teaching or suggesting hydrophobic coatings, or that hydrophilic-hydrophobic block copolymers could be used on electrosurgical instruments.

In view of the teachings of *Jones* and *Okajima*, the Applicant respectfully asserts that it is not obvious for catheter coating materials to be used on an electrosurgical instrument. Typically, materials are designed to be able to withstand the operating environment they are used in. In the present case, the materials in *Okajima* are only taught to be capable of withstanding the use as a catheter coating, where the hydrophilic lubricant layer cited in the Office Action is only taught to provide a lubricious surface and anti-thrombogenic characteristics. That is, the hydrophilic-hydrophobic block copolymer is only taught to be useful for lubricating the catheter as it moves through a patient's body, or more particularly, through blood vessels, and preventing thrombosis. Nothing within *Okajima*, or *Jones* discloses a use for the hydrophilic-hydrophobic block copolymer that approaches the harsh operating environment that arises during the use of an electrosurgical instrument.

During the use of a typical electrosurgical instrument, an electrical current is applied to a patient's tissue by being conducted through the electrosurgical instrument. Additionally, electrosurgical instruments operate at elevated temperatures which cause the patient's tissue to heat up in order to cut or cauterize the tissue. As such, any coating on the electrosurgical instrument has to be configured to withstand the conductance of electrical current as well as elevated temperatures. However, it is well known that not all materials can withstand such uses, and many materials degrade upon being exposed to either electrical currents or elevated temperatures. Since it is well known that many materials would not sufficiently withstand the operating environment of an electrosurgical instrument, it is not obvious for a material configured as a catheter coating to be applied as a coating onto an electrosurgical instrument. In any event, neither *Jones* nor *Okajima* provide any teaching or suggestion that catheter coatings are usable on electrosurgical instruments, or could withstand the harsh operating environment

associated with electrosurgical techniques. Thus, such a use for the coatings taught in *Okajima* goes beyond the teachings or suggestions of the references themselves.

In view of the foregoing, Applicant respectfully asserts that there is no motivation or suggestion to combine *Jones* with *Okajima* that arises from either reference. The Court has stated that “In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the references teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification.” *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Therefore, if there is no motivation to combine references, a case of *prima facie* obviousness has not been established.

Accordingly, there is no motivation to combine *Jones* and *Okajima* because the hydrophobic polymer of *Jones* that provides the “non-stick” coating for an electrosurgical instrument is completely inapposite to the hydrophilic lubricious catheter coating taught by *Okajima*. Additionally, *Jones* is completely devoid of any indication that it would be beneficial to apply a hydrophilic coating to an electrosurgical instrument, and *Okajima* does not cure the defect because the hydrophilic lubricious layer is only taught to be applicable to catheters. Moreover, both references are devoid of suggesting that materials usable for catheters coatings are also useful for electrosurgical instrument coatings. As such, neither reference provides any reason to be combined with the other.

Additionally, the Applicant respectfully asserts that there is no reasonable expectation of success in combining *Jones* with *Okajima* in order to arrive at the instant invention. The Court has stated, “prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success.” *In re Merck & Co., Inc.*, 800 F.2d 1091, 231

USPQ 375 (Fed. Cir. 1986). Accordingly, when there is no suggestion that the combination of references would be successful, a case of *prima facie* obviousness has not been established.

As described above, neither reference suggests the references could be successfully combined. Additionally, there is no reasonable expectation that the combination of *Jones* and *Okajima*, or modification thereof, would successfully result in the electrosurgical instrument coated with the multi-character material as presently claimed. There is no reasonable expectation of success because nothing suggests hydrophilic lubricious layers that are configured for use on catheters are capable of withstanding prolonged conductance of electricity, and the prolonged exposure to elevated temperatures, both of which are present during use of an electrosurgical instrument.

In view of the foregoing, Applicant respectfully submits that the *Jones* and *Okajima* references themselves do not provide any motivation or suggestion for being combined, and/or any reasonable expectation of success in making the proposed combination or arriving at the presently claimed invention. Accordingly, the Office Action has not satisfied the requirements for establishing a *prima facie* case of obviousness. Thus, claims 1-5, 7, 14, 15, 17-20, 22, 23, 40, 41, and 43 are allowable over *Jones* in view of *Okajima*, and Applicant respectfully requests that the rejection to these claims under 35 U.S.C. § 103(a) be withdrawn.

b. Rejection Over *Jones* in View of *Okajima* and *Layrolle*

Claims 29, 34, 35, 44, 46, and 47 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jones et al.* (U.S. Pat. No. 6,132,427) in view of *Okajima* (U.S. Patent No. 5,554,139) and in further view of *Layrolle et al.* (U.S. Patent No. 6,207,218) for the reasons set forth on pages 4-5 of the Office Action. Applicant respectfully traverses.

For the sake of brevity, the above-discussion of *Jones* and *Okajima* is assumed to be included in this remark. Additionally, in the background section *Layrolle* states, “The publication of P. Serekian entitled ‘Hydroxyapatite coatings in orthopaedic surgery’ . . . discusses the advantages and drawbacks of plasma and flame spraying, electrophoresis, dip coating, and magnetron sputtering” (underline added; *see*, column 2, lines 27-32). However, *Layrolle* does not further discuss electrophoresis of hydroxyapatite, or whether it has an advantage or drawback. Moreover, *Layrolle* is completely devoid of discussing electrosurgical instruments, coatings for electrosurgical equipment, or the use of electrophoresis for applying a multi-character coating to a base material.

In view of the foregoing, Applicant respectfully asserts that there is no motivation or suggestion to combine *Jones*, *Okajima*, and *Layrolle*, which arises from the references themselves. This lack of motivation for such a combination, while incorporating the above-discussion with regard to the combination of *Jones* and *Okajima*, is not cured by simply adding *Layrolle*. This is because the addition of *Layrolle* is only provided because it recites the term “electrophoresis.” However, *Layrolle* does not provide any indication to whether electrophoresis provides advantages or drawbacks. Moreover, there is no indication in *Layrolle*, *Jones*, and/or *Okajima* that electrophoresis would be useful in applying the coatings described in *Jones* and/or *Okajima* to a base material.

Additionally, the Applicant respectfully asserts that there is no reasonable expectation of success in combining *Jones*, *Okajima*, and *Layrolle* in order to arrive at the presently claimed invention. This is because the references do not teach electrophoresis would be successful in applying a hydrophobic polymer or hydrophobic-hydrophilic block copolymer to an

electrosurgical instrument or on anything. Also, there is no reasonable expectation of success arising from *Layrolle* for using electrophoresis to deposit anything other than hydroxyapatite.

In view of the foregoing, Applicant respectfully submits that the *Jones*, *Okajima*, and/or *Layrolle* references themselves do not provide any motivation or suggestion for being combined, and/or any reasonable expectation of success in making the proposed combination or arriving at the presently claimed invention. Accordingly, the Office Action has not satisfied the requirements for establishing a *prima facie* case of obviousness. Thus, claims 29, 34, 35, 44, 46, and 47 are allowable over *Jones* in view of *Okajima* and further in view of *Layrolle*, and Applicant respectfully requests that the rejection to these claims under 35 U.S.C. § 103(a) be withdrawn.

c. Rejection Over *Jones* in View of *Okajima* and *Fan*

Claims 8-10, 12, 13, 16, 24, and 26-28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jones et al.* (U.S. Pat. No. 6,132,427) in view of *Okajima* (U.S. Patent No. 5,554,139) as applied to claims 1, 2, 17, and 22 above, in further view of *Fan et al.* (U.S. Patent No. 5,295,978) for the reasons set forth on pages 5-7 of the Office Action. Applicant respectfully traverses.

Again, the above-discussions of *Jones* and *Okajima* are assumed to be included in this remark. Additionally, *Fan* teaches the use of poly(ethylene oxide) as a coating for some biomedical devices such as catheters, needles, guide wires, prophylactic devices, delivery systems, filters, and sheaths (*see*, column 9, lines 44-46). However, *Fan* does not teach or suggest that poly(ethylene oxide) is a suitable coating for transmitting an electrical current or withstanding high temperatures.

In view of the foregoing, Applicant respectfully asserts that there is no motivation or suggestion to combine *Jones*, *Okajima* and *Fan*, which arises from the references themselves. The lack of motivation for such a combination, while incorporating the above-discussion with regard to *Jones* and *Okajima*, is not cured by simply adding *Fan*. Moreover, there is no motivation to make this combination because none of these references provide any indication that the coating described in *Fan* could be used to coat an electrosurgical instrument. As such, none of these references provide any reason for being combined with each other.

Additionally, the Applicant respectfully asserts that there is no reasonable expectation for successfully combining *Jones*, *Okajima*, and *Fan* in order to arrive at the presently claimed invention. This is because *Jones* does not teach that poly(ethylene oxide) coatings can be successful electrosurgical coatings, and the *Okajima* does not teach that poly(ethylene oxide) can be used on catheters or on anything. While *Fan* provides a myriad of applications suitable for using the poly(ethylene oxide) coating (e.g., catheter coatings), it is completely devoid of teaching or suggesting such polymers could successfully withstand prolonged exposure to electrical currents or elevated temperatures. Thus, there is no reasonable expectation of success that the coatings taught by either *Okajima* and/or *Fan* could withstand the requirements of an electrosurgical instrument as taught in *Jones*.

In view of the foregoing, Applicant respectfully submits that the *Jones*, *Okajima*, and/or *Fan* references themselves do not provide any motivation or suggestion for being combined, and/or any reasonable expectation of success in making the proposed combination or arriving at the presently claimed invention. Accordingly, the Office Action has not satisfied the requirements for establishing a *prima facie* case of obviousness. Thus, claims 8-10, 12, 13, 16, 24, and 26-28 are allowable over *Jones* in view of *Okajima* and further in view of *Fan*, and



Applicant respectfully requests that the rejection to these claims under 35 U.S.C. § 103(a) be withdrawn.

d. Rejection Over Jones in View of Okajima, Layrolle, and Fan

Claims 33, 37, 38, and 45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jones et al.* (U.S. Pat. No. 6,132,427) in view of *Okajima* (U.S. Patent No. 5,554,139) in further view of *Layrolle et al.* (U.S. Patent No. 6,207,218) as applied to claims 29 and 44 above, in further view of *Fan et al.* (U.S. Patent No. 5,295,978) for the reasons set forth on pages 7-9 of the Office Action. Applicant respectfully traverses.

The previous remarks have discussed the various combinations of *Jones*, *Okajima*, *Layrolle*, and *Fan* that have been proposed in order to support the rejections contained in the Office Action. Accordingly, the discussions pertaining to such combinations are considered to be included within this remark against the combination of *Jones*, *Okajima*, *Layrolle*, and *Fan*. As recited, there is no motivation for making such combinations, and/or reasonable expectations of success, and the further combination of *Jones*, *Okajima*, *Layrolle*, and *Fan* does not cure the deficiencies. Thus, there is no motivation for making the combination *Jones*, *Okajima*, *Layrolle*, and *Fan*, and such a combination does not provide any reasonable expectation of success.

Additionally, with regard to claims 33 and 45, Applicant respectfully asserts the Office Action has not established a case of *prima facie* obviousness. These claims are drawn toward a method for coating a tip of an electrosurgical instrument, where the method uses “electrophoresis to draw the multi-character material into at least a portion of the pores” on the base material coating, and the “multi-character material comprises a charged unit.” On the other hand, the Office Action recited, “Fan et al. teach the method, step or device that includes a metallic or

ammonium ion, co. 5, lines 41-68 and col. 6, lines 1-3” (*see*, Office Action, page 8). However, the cited portion of *Fan* is not directed to a multi-character material, hydrophobic material, hydrophilic-hydrophobic block copolymer, or poly(ethylene oxide), but is only directed to “carboxylic acid-containing polymers” (*see Fan*, column 5, lines 41-42). As such, the combination of references does not teach or suggest each and every element of the presently claimed invention.

In any event, claims 37 and 38 are allowable for the same reasons claim 29 is allowable. This is because the addition of *Fan* does not cure the defects in the rejection against claim 29. Briefly, the addition of *Fan* does not teach or suggest any element in claim 29.


In view of the foregoing, Applicant respectfully submits that the *Jones*, *Okajima*, *Layrolle*, and/or *Fan* references themselves do not provide any motivation or suggestion for being combined, and/or any reasonable expectation of success in making the proposed combination or arriving at the presently claimed invention. Additionally, this proposed combination of references does no teach each and every element presently claimed. As such, the Office Action has not satisfied the requirements for establishing a *prima facie* case of obviousness. Thus, claims 33, 37, 38, and 45 are allowable over *Jones* in view of *Okajima* further in view of *Layrolle*, and further in view of *Fan*, and Applicant respectfully requests that the rejection to these claims under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

In view of the foregoing, Applicants respectfully request favorable reconsideration and allowance of the present claims. In the event there remains any impediment to allowance of the application, which could be clarified in a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney.

Dated this 4<sup>th</sup> day of February 2005.

Respectfully submitted,

  
JONATHAN W. RICHARDS  
Registration No. 29,843  
Attorney for Applicant  
(801) 533-9800

JWR:jmb:mla  
MLA0000003021V001